

**REMARKS**

Claims 2, 4-17 and 19-31 are pending the above-referenced patent application. In this response, claims 2 and 17 have been amended.

**Claim Rejections – 35 U.S.C §103(a)**

The Examiner has rejected claims 2, 4-17 and 19-31 under 35 U.S.C. 103(a) as being unpatentable over Grisamore (U.S. Patent No. 6,535,901, hereinafter "Grisamore"); and has rejected claims 2, 4-17 and 19-31 under 35 U.S.C. 103(a) as being unpatentable over Costa (U.S. Patent No. 5,935,201, hereinafter "Costa"). These rejections are respectfully traversed. Reconsideration of the above-referenced patent application in view of the following remarks and foregoing amendments is respectfully requested.

**Grisamore**

It is noted that in order to establish *prima facie* obviousness there must be some suggestion or motivation to modify or combine reference teachings, and the modification or combination, if successful, must teach or suggest all of the claim limitations. As stated in the Manual for Patent Examining Procedure (MPEP), § 2142/2143, "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." It is respectfully submitted that the cited reference does not meet these criteria. For example, the Grisamore, if successfully modified, would still not teach or suggest all the claim limitations.

The Examiner concedes that Grisamore is lacking at least one element of the rejected claims. According to the Examiner, "Grisamore does not teach registers in figures 5 and 9. However,

Grisamore discloses that it is known in the art to use registers at optimal points in a multiplier to enable pipelined processing which provides a high through put multiply accumulate circuit." Although Assignee does not necessarily agree with the Examiner's characterization of the rejected claims, it is respectfully submitted that Grisamore, if successfully modified, would still not teach or suggest all the claim limitations.

As just an example, Grisamore clearly describes passing partial products from a partial product generator to a reduction tree module, and passing and subsequently retrieving carry terms from a memory device. [Col. 2:63-3:8.]. There is no description throughout Grisamore that registers are implemented in the partial product generator, as is conceded by the Examiner. Additionally, there is no contemplation throughout Grisamore to implement a Wallace-architecture of full-adders to receive at least a portion of the one or more groups of three bits, half-adders to receive at least a portion of the one or more the groups of two bits, and associated registers to receive at least a portion of the one or more the groups of one bit in the selected resources, the series of Boolean function generators to combine the input terms to produce intermediate summation results. Rather, Grisamore discloses that its Wallace-architecture is based on "one of [a] plurality of reduction patterns and the size of the current partial products" [2:35-2:41]. There is no description throughout Grisamore that the input terms are analyzed on a bit-wise basis.

It is respectfully submitted, therefore, that for at least the reasons presented above, a prima facie case of obviousness under section 103 of the patent statute has not been made. It is noted that many other bases for traversing the rejection could be provided, but Assignee believes that the ground discussed above is sufficient. It is, therefore, respectfully submitted that the rejected claims are in a condition for allowance, and it is respectfully requested that the Examiner withdraw the rejection of claim 2.

Claims 4-16 depend from and include all limitations of claim 2. Therefore, it is respectfully submitted that these claims are in a condition for allowance on at least the same basis. Claims 17 and 19-31 contain limitations similar to claim 2, and are in a condition for allowance for at least the same reasons as claim 2.

**Costa**

Additionally, Costa does not meet all of the limitations of the rejected claims. The Examiner concedes that Costa is lacking at least one element of the rejected claims. According to the Examiner, "It is noted that Costa et al does not teach registers in the Wallace-architecture. However, since it is known in the art to use registers at optimal points in a multiplier to enable pipelined processing which provides a high through put multiply circuit (See col. 1, lines 33-41)." However, Costa describes a multiplier circuit to produce a final sum of partial products, and there is no contemplation throughout Costa to implement a method as recited in the rejected claims, including a Wallace-architecture of full-adders to receive at least a portion of the one or more groups of three bits, half-adders to receive at least a portion of the one or more the groups of two bits, and associated registers to receive at least a portion of the one or more the groups of one bit. In Costa, a process is clearly described wherein input terms are combined, and partial products are generated (col 8:9-col 8:29 and Fig. 2). The partial products are passed to a combinatorial network (col 9:29-col 9:54 and Fig. 7). There is no mention of utilizing registers as recited in the rejected claims.

It is respectfully submitted, therefore, that a prima facie case of obviousness under section 103 of the patent statute has not been made. It is noted that many other bases for traversing the rejection could be provided, but Assignee believes that the ground discussed above is sufficient. It is, therefore, respectfully submitted that the rejected claims are in a condition for allowance, and it is respectfully requested that the Examiner withdraw the rejection of claim 2.

Claims 4-16 depend from and include all limitations of claim 2. Therefore, it is respectfully submitted that these claims are in a condition for allowance on at least the same basis. Claims 17 and 19-31 contain limitations similar to claim 2, and are in a condition for allowance for at least the same reasons as claim 2.

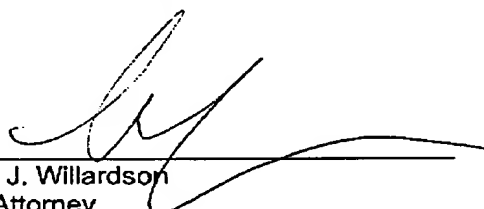
**CONCLUSION**

In view of the foregoing, it is respectfully submitted that all of the claims pending in this patent application, as amended, are in condition for allowance. If the Examiner has any questions, he is invited to contact the undersigned at (503) 439-6500. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Please charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account number 50-3130.

Respectfully submitted,

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